

Dock-HW Fabrication Document

Layer Stack Legend

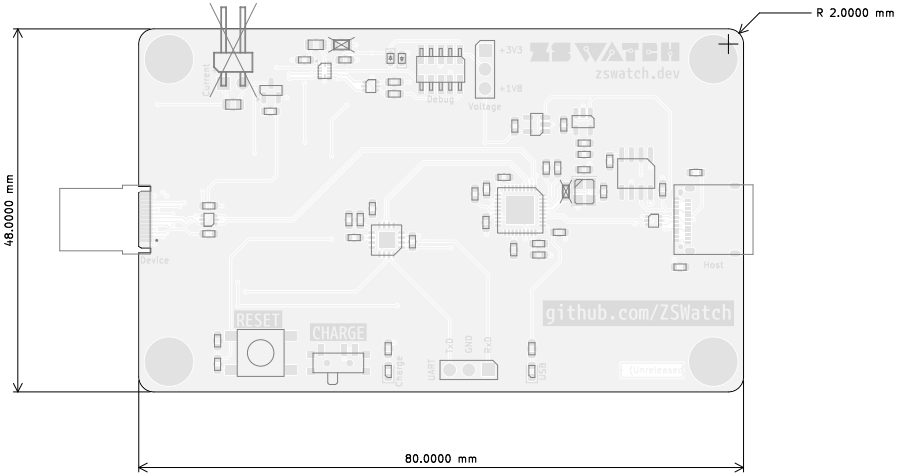
	Material	Layer	Thickness	Dielectric	Type	Gerber
		F,Paste			Paste Mask	
		F,Silkscreen			Legend	GBR
		F,Mask	0,01mm		Solder Mask	GBR
	Copper	F,Cu	0,035mm (1oz)		Signal	GBR
	Core		0,1855mm	FR4	Dielectric	
	Copper	Inner1	0,035mm (1oz)		Plane	GBR
	Prepreg		0,23mm	FR4	Dielectric	
	Copper	Inner2	0,035mm (1oz)		Plane	GBR
	Core		0,1855mm	FR4	Dielectric	
	Copper	B,Cu	0,035mm (1oz)		Signal	GBR
		B,Mask	0,01mm		Solder Mask	GBR
		B,Silkscreen			Legend	GBR
		B,Paste			Paste Mask	

Total thickness: 0,761mm
Note: external layer thicknesses are specified after plating

Impedance Table

Transmission Line	Impedance [ohms]	Tolerance [%]	Layer	Trace Width [mm]	Gap [mm]	Ref. Layers
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Top Fabrication (Scale 1:1)



FABRICATION NOTES (UNLESS OTHERWISE SPECIFIED)

- FABRICATE PER IPC-6012A CLASS 2.
- OUTLINE DEFINED IN SEPARATE GERBER FILE WITH "Edge_Cuts.GBR" SUFFIX.

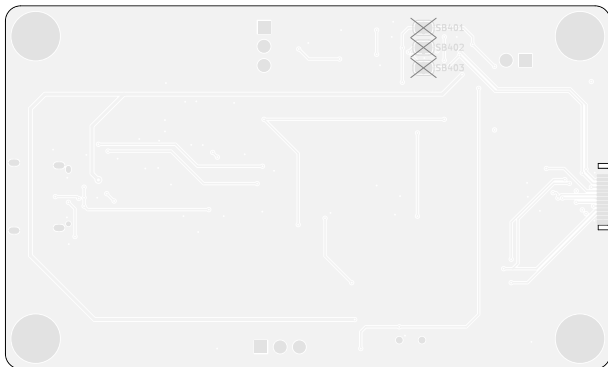
DIMENSIONS OF CIRCUMSIZED RECTANGLE SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
- SEE SEPARATE DRILL FILES WITH ".DRL" SUFFIX FOR HOLE LOCATIONS.

SELECTED HOLE LOCATIONS SHOWN ON THIS DRAWING FOR REFERENCE ONLY.
- SURFACE FINISH: HAL SNPB
- SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR WHITE.
- SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING BLACK NON-CONDUCTIVE EPOXY INK.
- ALL VIAS ARE TENTED ON BOTH SIDES UNLESS SOLDERMASK OPENED IN GERBER.
- VENDOR SHOULD FOLLOW ROHS COMPLIANT PROCESS AND Pb FREE FOR MANUFACTURING
- PCB MATERIAL REQUIREMENTS:

A. FLAMMABILITY RATING MUST MEET OR EXCEED UL94V-0 REQUIREMENTS.
B. Tg 150 C OR EQUIVALENT.
C. EQUIVALENT MATERIAL SHALL BE RoHS COMPLIANT, HALOGEN FREE AND APPROVED BY ZSWATCH.
- DESIGN GEOMETRY MINIMUM FEATURE SIZES:

BOARD SIZE 80.000 x 48.000 mm
BOARD THICKNESS 0.761 mm
TRACE WIDTH 0.170 mm
TRACE TO TRACE 0.125 mm
MIN. HOLE (PTH) 0.250 mm
MIN. HOLE (NPTH) 0.650 mm
ANNULAR RING 0.100 mm
COPPER TO HOLE 0.100 mm
COPPER TO EDGE 0.100 mm
HOLE TO HOLE 0.250 mm

	Comments: ZSWatch	Company: ZSWatch		Variant: CHECKED	Git Hash: d2a16f9
		Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Title: Top Fabrication (Scale 1:1)	File Name: ZSWatch-Dock.kicad_pcb	Designer: Daniel Kampert	Date: 2025-07-13	Revision: + (Unreleased)
	Sheet Path:		Reviewer:	Size: A3	Sheet: 1 of 10

Dock-HW Fabrication Document							
Bottom Fabrication (Scale 1:1)							
							

	Comments: ZSWatch		Company: ZSWatch		Variant: CHECKED	Git Hash: d2a16f9
			Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Title: Drill Drawing (L1 - L4)		File Name: ZSWatch-Dock.kicad_pcb	Designer: Daniel Kampert	Date: 2025-07-13	Revision: + (Unreleased)
	Sheet Path:			Reviewer:	Size: A3	Sheet: 3 of 10

Dock-HW Fabrication Document

Drill Drawing L1 - L4 (Scale 1:1)

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
X	1 + 1	0,65mm (25,59mils)	NPTH	Round + Slot	F,Cu - B,Cu	Mechanical
O	2	0,90mm (35,43mils)	NPTH	Round	F,Cu - B,Cu	Mechanical
	Total 4					

Comments:
ZSWatch

Sheet Title:
Drill Drawing (L1 - L4)

Sheet Path:

Company:
ZSWatch

Board Name:
Dock-HW

File Name:
ZSWatch-Dock.kicad_pcb

Designer:
Daniel Kampert

Reviewer:

Variant:
CHECKED

Project Name:
ZSWatch Dock

Date:
2025-07-13

Size:
A3

Git Hash:
d2a16f9

Revision:
+ (Unreleased)

Sheet:
4 of 10

Dock-HW Fabrication Document

Drill Drawing L1 - L4 (Scale 1:1)

Drill Table

Symbol	Count	Hole Size	Plated	Hole Shape	Drill Layer Pair	Hole Type
X	1 + 1	0,65mm (25,59mils)	NPTH	Round + Slot	F,Cu - B,Cu	Mechanical
O	2	0,90mm (35,43mils)	NPTH	Round	F,Cu - B,Cu	Mechanical
	Total 4					

Comments:
ZSWatch

Sheet Title:
Drill Drawing (L1 - L4)

Sheet Path:

Company:
ZSWatch

Board Name:
Dock-HW

File Name:
ZSWatch-Dock.kicad_pcb

Designer:
Daniel Kampert

Reviewer:

Variant:
CHECKED

Project Name:
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d2a16f9

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+ (Unreleased)

Sheet:
4 of 10

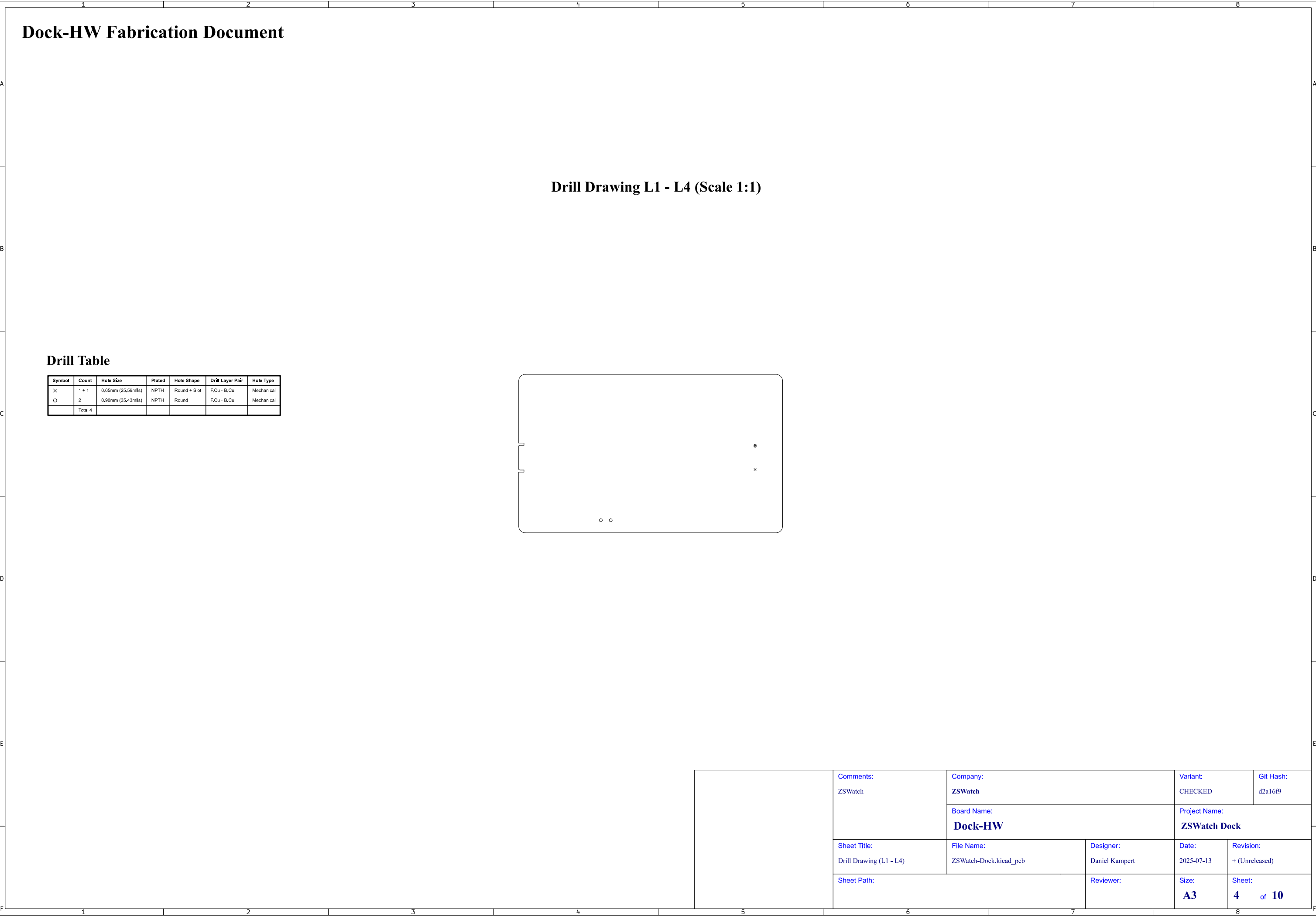
Dock-HW Fabrication Document

Drill Drawing L1 - L4 (Scale 1:1)

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O	2	0,90mm (35,43mils)	NPTH	Round	F,Cu - B,Cu	Mechanical
	Total 4					

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		Dock-HW		ZSWatch Dock	
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Drill Drawing (L1 - L4)	ZSWatch-Dock.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)	
Sheet Path:	Reviewer:		Size:	Sheet:	
			A3	4 of 10	

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Dock-HW Fabrication Document

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Top Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]
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Ref.	Net	X [mm]	Y [mm]
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The PCB diagram shows various components like +3V3, +1V8, Debug Voltage, Device, Host, UART, GND, RxD, Tx+, Tx-, CHARGE, RESET, zswatch.dev, github.com/ZSWatch, and Unreleased. Red X marks indicate specific test points or areas of interest.

Ref.	Net	X [mm]	Y [mm]
------	-----	--------	--------

	Comments: ZSWatch	Company: ZSWatch		Variant: CHECKED	Git Hash: d2a16f9
		Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Title: Top Test Points (Scale 1:1)	File Name: ZSWatch-Dock.kicad_pcb	Designer: Daniel Kampert	Date: 2025-07-13	Revision: + (Unreleased)
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Dock-HW Fabrication Document

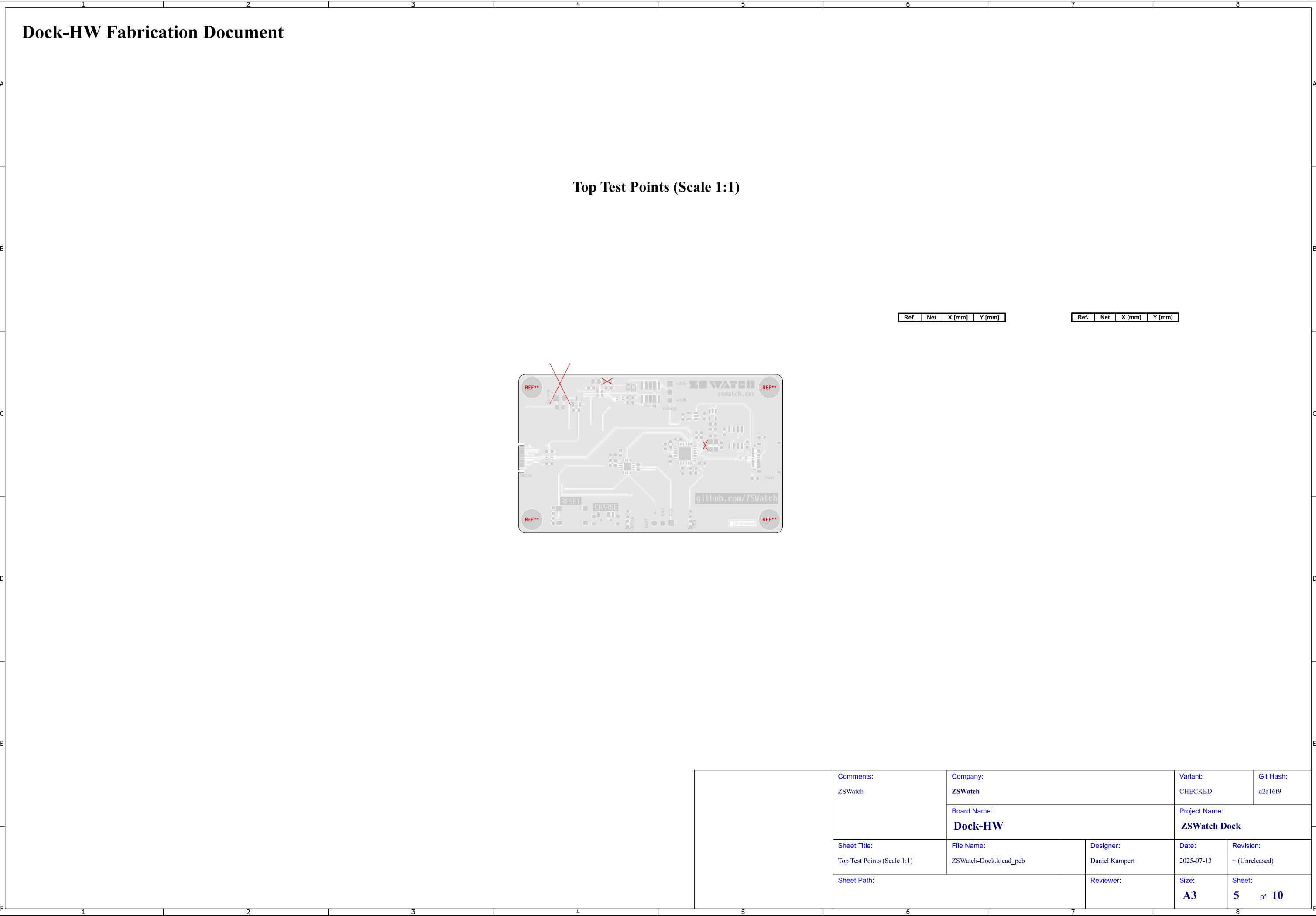
Top Test Points (Scale 1:1)

Ref.	Net	X [mm]	Y [mm]
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Ref.	Net	X [mm]	Y [mm]
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The image shows a top-down view of a PCB layout for the ZSWatch Dock. The board is rectangular with rounded corners. It features a central microcontroller unit (MCU) with various peripheral components. Test points are marked with red 'X's and labeled 'REF**'. The layout includes a USB-C port on the left, a USB-A port on the right, and a 3.5mm audio jack at the bottom. The board is populated with various components including resistors, capacitors, and integrated circuits. The text 'ZSWATCH' and 'zswatch.dev' are printed on the board. The URL 'github.com/ZSWatch' is also visible. The board is labeled 'Device' on the left and 'Host' on the right. The text 'RESET' and 'CHARGE' are printed on the board. The text 'UART', 'GND', and 'VDD' are also visible. The text 'Unreleased' is printed on the board. The text 'REF**' is printed on the board. The text 'X' is printed on the board. The text 'Y' is printed on the board. The text 'X [mm]' is printed on the board. The text 'Y [mm]' is printed on the board. The text 'Ref.' is printed on the board. The text 'Net' is printed on the board. The text 'X [mm]' is printed on the board. The text 'Y [mm]' is printed on the board.

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		Board Name:		Project Name:	
		Dock-HW		ZSWatch Dock	
Sheet Title:	File Name:	Designer:	Date:	Revision:	
Top Test Points (Scale 1:1)	ZSWatch-Dock.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)	
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Dock-HW Fabrication Document

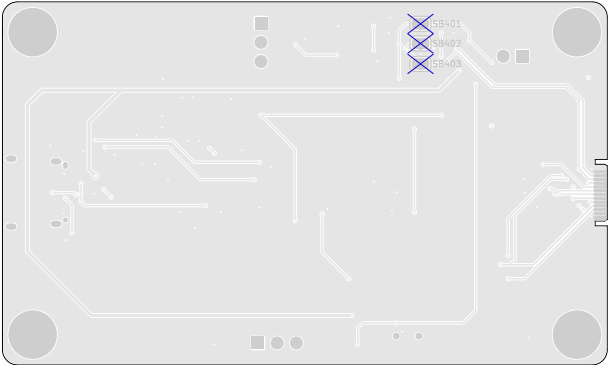
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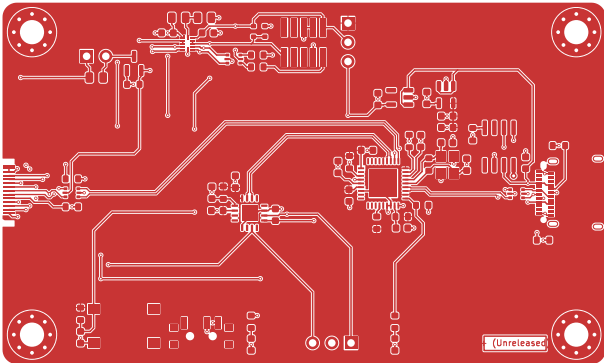
Ref.	Net	X [mm]	Y [mm]
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Ref.	Net	X [mm]	Y [mm]
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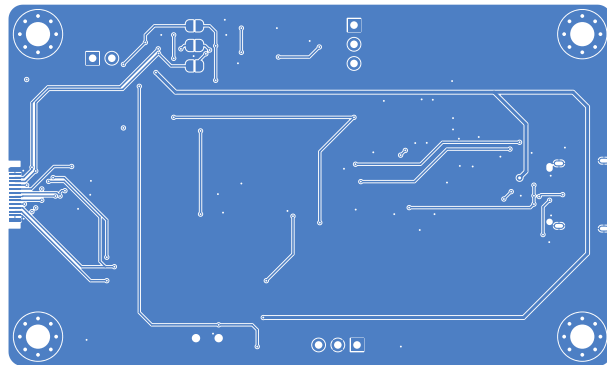
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		Board Name:		Project Name:	
		Dock-HW		ZSWatch Dock	
Sheet Title:	File Name:	Designer:	Date:	Revision:	
Top Test Points (Scale 1:1)	ZSWatch-Dock.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)	
Sheet Path:		Reviewer:	Size:	Sheet:	
			A3	5 of 10	

	1	2	3	4	5	6	7	8
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B	<div>Bottom Test Points (Scale 1:1)</div>							
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F						<div><div>Comments:</div><div>ZSWatch</div></div>	<div><div>Company:</div><div>ZSWatch</div></div> <div><div>Board Name:</div><div>Dock-HW</div></div>	<div><div>Variant:</div><div>CHECKED</div></div> <div><div>Project Name:</div><div>ZSWatch Dock</div></div>
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B	<div>F.Cu (Scale 1:1)</div>							
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D								
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F						<div><div>Comments:</div><div>ZSWatch</div></div>	<div><div>Company:</div><div>ZSWatch</div></div> <div><div>Board Name:</div><div>Dock-HW</div></div>	<div><div>Variant:</div><div>CHECKED</div></div> <div><div>Project Name:</div><div>ZSWatch Dock</div></div>
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	1	2	3	4	5	6	7	8

Dock-HW Fabrication Document										
Inner1 (Scale 1:1)										
										
					Comments:		Company:		Variant:	Git Hash:
					ZSWatch		ZSWatch		CHECKED	d2a16f9
									Board Name:	
					Sheet Title:		File Name:	Designer:	Date:	Revision:
Inner1 (Scale 1:1)		ZSWatch-Dock.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)					
Sheet Path:			Reviewer:		Size:	Sheet:				
					A3	8 of 10				

	Comments:	Company:		Variant:	Git Hash:
	ZSWatch	ZSWatch		CHECKED	d2a16f9
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	Sheet Path:		Reviewer:	Size:	Sheet:
				A3	8 of 10

Dock-HW Fabrication Document											
B.Cu (Scale 1:1)											
											
					Comments: ZSWatch		Company: ZSWatch		Variant: CHECKED	Git Hash: d2a16f9	
							Board Name: Dock-HW		Project Name: ZSWatch Dock		
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					Sheet Path:			Reviewer:		Size: A3	Sheet: 10 of 10

	Comments:	Company:		Variant:	Git Hash:
	ZSWatch	ZSWatch		CHECKED	d2a16f9
		Board Name:		Project Name:	
		Dock-HW		ZSWatch Dock	
	Sheet Title:	File Name:	Designer:	Date:	Revision:
	B.Cu (Scale 1:1)	ZSWatch-Dock.kicad_pcb	Daniel Kampert	2025-07-13	+ (Unreleased)
	Sheet Path:		Reviewer:	Size:	Sheet:
				A3	10 of 10